

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

Listing of Claims

Claim 1 (Currently amended): An austenitic stainless steel having high stress corrosion crack resistance, characterized by containing, in percent by weight,

0.030% or less C,

~~0.1~~ 0.02% or less Si,

~~2.0~~ 0.85% or less Mn,

0.03% or less P,

0.002% or less S,

11 to 26% Ni,

17 to 30% Cr,

3% or less Mo, and

~~0.01~~ 0.003% or less N,

the balance substantially being Fe and unavoidable impurities, and

stacking fault energy (SFE) calculated by the following equation (1):

$$\text{SFE}(\text{mJ/m}^2) = 25.7 + 6.2 \times \text{Ni} + 410 \times \text{C} - 0.9 \times \text{Cr} - 77 \times \text{N} - 13 \times \text{Si} - 1.2 \times \text{Mn} \dots (1)$$

is 100 (mJ/m²) or higher.

Claim 2 (Currently amended): An austenitic stainless steel having high stress corrosion crack resistance, characterized by containing, in percent by weight,

0.030% or less C,

~~0.1~~ 0.02% or less Si,

~~2.0~~ 0.85% or less Mn,

0.03% or less P,

0.002% or less S,

11 to 26% Ni,

17 to 30% Cr,

3% or less Mo,

~~0.01~~ 0.003% or less N,

0.001% or less Ca,

0.001% or less Mg, and

0.004% or less O,

the balance substantially being Fe and unavoidable impurities.

Claim 3 (Currently amended): An austenitic stainless steel having high stress corrosion crack resistance, characterized by containing, in percent by weight,

0.030% or less C,

~~0.1~~ 0.02% or less Si,

~~2.0~~ 0.85% or less Mn,

0.03% or less P,
0.002% or less S,
11 to 26% Ni,
17 to 30% Cr,
3% or less Mo,
~~0.01~~ 0.003% or less N,
0.001% or less Ca,
0.001% or less Mg,
0.004% or less O, and
0.01% or less of any one of Zr, B and Hf,
the balance substantially being Fe and unavoidable impurities.

Claim 4 (Original): The austenitic stainless steel having high stress corrosion crack resistance according to any one of claims 1 to 3, characterized in that

(Cr equivalent) – (Ni equivalent) is in the range of –5% to +7%.

Claim 5 (Previously presented): The austenitic stainless steel having high stress corrosion crack resistance according to any one of claims 1 to 3, characterized in that

Cr equivalent / Ni equivalent is 0.7 to 1.4.

Claim 6 (Cancelled)

Claim 7 (Previously presented): A manufacturing method for a stainless steel, characterized in that

a billet consisting of the austenitic stainless steel according to any one of claims 1 to 3 is subjected to solution heat treatment at a temperature of 1000 to 1150°C.

Claim 8 (Previously presented): A manufacturing method for a stainless steel, characterized in that

a billet consisting of the austenitic stainless steel according to any one of claims 1 to 3 is subjected to solution heat treatment at a temperature of 1000 to 1150°C, thereafter being subjected to cold working of 10 to 30%, and is then subjected to intergranular carbide precipitation treatment at a temperature of 600 to 800°C for 1 to 50 hours.

Claim 9 (Previously presented): A structure in a nuclear reactor, characterized by being formed of the austenitic stainless steel according to any one of claims 1 to 3.

Claim 10 (Previously presented): A pipe for a nuclear reactor, characterized by being formed of the austenitic stainless steel according to any one of claims 1 to 3.

Claim 11 (Previously presented): A structure in a nuclear reactor, characterized by being formed of the stainless steel obtained by the manufacturing method according to claim 7.

Claim 12 (Previously presented): A pipe for a nuclear reactor, characterized by being formed of the stainless steel obtained by the manufacturing method according to claim 7.

Claim 13 (Previously presented): A structure in a nuclear reactor, characterized by being formed of the stainless steel obtained by the manufacturing method according to claim 8.

Claim 14 (Previously presented): A pipe for a nuclear reactor, characterized by being formed of the stainless steel obtained by the manufacturing method according to claim 8.